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ELEMENTS OF THE AUTOMOBILE.

M T

Part 5

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The Bray Pictures Corporation  
presents  
"ELEMENTS OF THE AUTOMOBILE"  
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Produced for  
The Education  
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General Staff  
under the supervision  
of the  
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Quartermasters Corps  
United States Army.

M.S

The Carburetor.

Sub

Before gasoline can be used for producing power, it must be atomized.

Sc 1

Raw gasoline is poured into a tumbler and is then blown into a fine spray with glass atomizer.

Sub

The job of the carburetor is to atomize the gasoline (Break it up and mix it with air).

Sc 2

Close up of one cylinder engine. Straight intake manifold dissolves to curved one with carburetor in full.

Sub

In a preceding reel it was shown that the piston acts as a suction pump.

Sc 3

One cylinder engine and beaker. Piston goes down pulling in liquid. Hold.

Sub

This sucking action is used to spray the gasoline in the carburetor.

Sc 4

Close up of one cylinder engine. Carburetor and intake manifold shown in full. Carburetor dissolves to section of pipe.

Sub

As the piston moves downward it sucks air in through this pipe.

Sc 5

Close up of one cylinder engine. Pointer indicates

path through intake pipe. Piston goes down sucking in air (dots). Hold.

Sub The air passes a jet--

Sc 6 Close up of one cylinder engine. Pointer indicates jet. Dissolve to close up of simple carburetor, jet and feed pipe dissolve in.

Sub -- which contains gasoline.

Sc 7 Close up of simple carburetor. Gasoline comes in.

Sub As the air passes the jet it draws the gasoline out, breaking it into tiny particles.

Sc 8 Close up of simple carburetor. Action of gasoline only.

Sub A tube called the Venturi increases the suction at the jet by narrowing the passage.

Sc 9 Close up of simple carburetor. Venturi in section dissolves in.

Sub The principle of the Venturi.

Sc 10 Very close up of plain tube. Arrows dissolve in in action. Venturi dissolves in with action of arrows. Flash to simple carburetor. Action of air and gasoline (dots).

Sub It is necessary to keep the gasoline at the top of the jet.

Sc 11 Close up of simple carburetor. Pointer indicates top of the jet. Dotted line dissolves in at top of jet.

Sub The gasoline is stored in a chamber.

Sc 12 Close up of simple carburetor. Dotted line at top of jet. Float chamber dissolves in.

Sub Gasoline enters here.

Sc 13 Close up. Pointer indicates path. Gasoline enters.

Sub The amount of gasoline supplied is regulated by a needle valve, which closes when the gasoline is at the proper level.

Sc 14 Close up. Pointer indicates small openings. Gasoline rises to proper level and the supply is cut off by the needle valve. Pointer indicates it.

Sub The valve is operated by a float.

Sc 15 Close up. Float and weights dissolve in. Dissolve to



section of float.

- Sub As the float goes up, the valve closes; as it goes down, the valve opens.
- Sc 16 Close up. Pointer indicates needle valve when open. Float goes up. Pointer indicates valve closed. Float goes down. Pointer again indicates. Gasoline enters. When it reaches proper level valve closes.
- Sc 16
- Sub As soon as a little gasoline is drawn off, the valve opens and enough comes in to make up.
- Sc 17 Air passes through tube, taking gasoline with it. Float drops. Pointer indicates level. More gasoline is admitted. Repeat action several times.
- Sub The amount of gas ( gasoline and air) supplied to the engine is regulated by a butterfly valve.
- Sc 18 Butterfly valve dissolves in. Action of valve opening and closing.
- Sub As the valve is opened, more gas is admitted to the engine, and the engine speeds up.
- Sc 19 Close up of carburetor in action. Butterfly opens gradually until wide open. Flash to one cylinder engine and carburetor. Pointer indicates butterfly valve when closed. Action of engine and gases, slow speed. Butterfly valve opens slightly. Pointer indicates it. Butterfly valve opens all the way. Pointer indicates it. Engine slows down. Pointer action is the same as when building up.
- Sub the  
At high speeds suction of the engine is very great.
- Sc 20 One cylinder engine with gases at high speed. Flash to close up of carburetor in action at high speed.
- Sub This increased suction affects the gasoline more than it does the air. The mixture becomes too rich.
- Sc 21 Close up of carburetor. Butterfly valve wide open. One suction stroke shown. The gasoline dots are exaggerated. Hold. Pointer indicates them. The rest of this stroke is then completed.
- Sub To keep the mixture right, it is necessary to admit more air. This is done with an auxiliary valve.
- Sc 22 Auxiliary valve dissolves in. Pointer presses top of valve several times.
- Sub The valve is opened by the suction of the engine, when the suction becomes great enough to overcome the spring.
- Sc 23 Close up of carburetor in action at slow speed. Speed

increases. When valve is wide open, auxiliary valve opens.  
Continuous action. Flash to one cylinder in action at  
high speed. Flash to close up of carburetor. No action.  
Dissolve to outside view.

Sub

End of Part 5.

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